

LOHITH SURAPUREDDY

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🌐 Portfolio

🌐 LinkedIn

🌐 GitHub

📄 LeetCode

EXPERIENCE

Jyuni

August 2025 – Present

Software Engineer

Remote

- Built the core practice management platform from the ground up as the sole engineer, designing the **Next.js**, **Express.js**, and **Firebase** architecture across clinical, billing, and operational workflows.
- Designed scheduling infrastructure supporting recurring appointments, staff availability, conflict detection, rescheduling, session tracking, and authorization-based scheduling.
- Developed clinical workflows for patient management, treatment plans and goals, data collection, session documentation, caregiver portals, and therapist onboarding.
- Architected the insurance billing pipeline integrating **Stedi** and **Claim.MD** for eligibility verification, **EDI 837** claim submission, payer responses, and claim status processing.
- Integrated **Azure OpenAI** to generate structured SOAP notes from session data, with therapist review and digital signing.
- Built **Stripe** subscription billing with idempotent webhook handling, failed-payment retries, and plan changes with proration across the full subscription lifecycle.

PROJECTS

Centralized Exchange | [GitHub](#)

- Built a centralized crypto exchange for spot and perpetual futures in **TypeScript** and **Bun**, around a single-threaded in-memory matching engine (price-time priority) with no I/O in its critical section, making order placement atomic without locks.
- Matched each **Redis** primitive to its failure mode: lists for engine request routing, streams with consumer groups for durable trade persistence, and pub/sub for market data fan-out.
- Implemented perpetuals with margin, funding, and liquidations checked against a liquidation-price index, so each mark price update costs $O(\text{positions at risk})$ instead of a full scan.
- Built a **Next.js** trading UI streaming order book, trades, and candles over **WebSockets**, with Redis pattern subscriptions sending each market only to its viewers.

AI Coding Agent | [GitHub](#)

- Engineered a terminal-based AI coding agent in **TypeScript** and **Bun**, implementing a streaming **tool-calling loop** with file read/write and Bash tools, gated by a permission layer, to autonomously execute multi-step coding tasks.
- Built a provider-agnostic model layer normalizing **Anthropic**, **OpenAI**, and **Gemini** streaming and tool-call formats behind a single interface, with credential management and model selection powered by the **models.dev** catalog.

SendIt | [GitHub](#)

- Built a peer-to-peer (P2P) file sharing app using **React** and **WebRTC**, with a **WebSocket** signaling server establishing direct browser-to-browser connections.
- Kept transfers fully peer-to-peer with no server-side storage, and tuned data chunking to sustain up to **4MB/s** on files over **700MB**.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, SQL

Backend: Node.js, Bun, Express.js, WebSockets, Redis, Prisma

Databases: PostgreSQL, MongoDB, Firestore

AI: LLM Agents, Tool Calling, OpenAI & Gemini APIs, Azure OpenAI

Cloud & DevOps: AWS, GCP, Docker, GitHub Actions, Git, Firebase

Frontend: React, Next.js, Tailwind CSS

EDUCATION

Vellore Institute of Technology

September 2021 – May 2025

B.Tech in Computer Science and Engineering, CGPA: 8.14

Vellore, Tamil Nadu